

AMENDMENTS TO THE CLAIMS

1. (Currently amended) A semiconductor device, comprising:

a semiconductor substrate having a main surface;

an element isolating region for defining an element forming region on the main surface of said semiconductor substrate;

an isolation region having a strip-shape ~~in cross-section~~ and having a peak impurity concentration at a prescribed depth position from the main surface of said semiconductor substrate;

a connection hole provided piercing through said element isolating region;

an anti-HF (hydrofluoric acid) side wall film not etched by hydrofluoric acid, provided to cover a side wall of said connection hole at least near a lower end of said connection hole;

an interconnection layer provided to fill an inner portion of said connection hole;

and

an impurity region provided in said semiconductor substrate extending from the lower end of said connection hole to said isolation region, wherein said impurity region comprises a first impurity region portion provided to connect said interconnection layer to said isolation region, and a second impurity region portion provided near the lower end of said connection hole and connected to said interconnection layer, ~~the cross-sectional width of the first impurity region portion being~~ approximately equal in width to the internal diameter of the connection hole ~~smaller than the cross-sectional~~ and the width of the second impurity region portion being substantially greater than the internal diameter of the connection hole.

2. (Original) The semiconductor device according to claim 1, wherein said anti-HF side wall film is a nitride film.

3: (Cancelled)

4. (Original) The semiconductor device according to claim 1, wherein said anti-HF side wall film is either a polysilicon film or an amorphous silicon film.

5-8. (Cancelled)